

*Description of Twenty new Species of Australian Coleoptera, belonging to the families Cicindelidæ and Cetoniidæ, by WILLIAM MACLEAY, JUNR., Esq., M.L.A.*

[Read 4th August, 1862.]

THE following Paper contains descriptions of Twenty hitherto undescribed species of *Coleoptera*, principally selected from a large collection of Insects, which, as I mentioned at the last meeting of this Society, I have lately received from Port Denison. I have not, however, confined myself to Insects from that locality, but have included several species from other parts of Australia, which I believe to be undescribed.

Family CICINDELIDÆ.

Genus MEGACEPHALA, Latr.

Subgenus TETRACHA, Hope.

1.—TETRACHA HUMERALIS.

Viridi-anea mandibulis labro antennis pedibus anoque ferrugineis, elytris atro-cyaneis granulatis punctorum lineâ irregulari subsuturali pone scutellum retrorsum incurvâ vittâque ferrugineâ marginali pone humerum dilatatâ.

Long. 9 lin., lat.  $3\frac{1}{4}$  lin.

Hab. Port Denison.

The head, thorax, and under part of the body are of a brassy green, tinged towards the edges with blue; the elytra, which are roughly granulated, are of a very dark blue, without metallic brilliancy; an irregular line of small punctures extends along the whole length of each elytron at a short distance from the suture, turning inwards at the base, and forming a second line for a short distance near the scutellum. The margins of the elytra from the shoulders to the apex are of a reddish yellow, a patch of the same colour extending from the marginal vitta, almost into the centre of the disc, a little behind the shoulders. The mandibles, labrum, antennæ, legs, and terminal segment of the abdomen, are ferruginous.

This insect was found in considerable numbers under rubbish in the dry sandy bed of the river "Don." It is probably a nocturnal insect, as the two following species certainly are. Mr. Bates describes all those he found in the valley of the Amazon as nocturnal.—(*Vid. Trans. Ent. Soc., Vol. 2, new series.*)

2.—T. SCAPULARIS.

*Æneo-viridis elytris granulatis flavo-marginatis punctorum lineâ irregulari subsuturali, mandibulis labro antennis pedibusque luridis.*

Long.  $7\frac{1}{2}$  lin., lat. 3 lin.

Hab. Port Denison.

The head, thorax, and under side of the body are of a brilliant metallic green; the elytra, which are finely granulated, are also green, but with less metallic brilliancy. The irregular line of punctures near the suture of each elytron is not so well marked in this species as in the last. The mandibles, labrum, antennæ, legs, lateral margins of the elytra, and, in the females, the terminal segment of the abdomen, are of a dirty yellow.

I have only two specimens of this species, both captured on the wing, at night, in a lighted room.

3.—T. CRUCIGERA.

*Flava capite thorace elytrorumque vittâ suturali usque ad apicem haud extendente fasciâque dimidiatâ æneo-viridibus.*

Long. 8 lin., lat. 3 lin.

Hab. Port Denison and Rockhampton.

The head and thorax are metallic green above and below, the elytra and abdomen are yellow; the former, which are punctate, having a green cruciform mark, formed by a sutural vitta, extending from the base to near the apex, crossed by a fascia a little behind the middle, which reaches half across each elytron; the mandibles, which are only bidentated, labrum, antennæ and legs are yellow.

Mr. de Chaudoir (*Bullet. de Moscou, 1850, p. 7*), has separated the yellow group of *Megacephalide*, to which this insect seems to belong, from the others under the generic name of *Phæorantha*, and Mr. Westwood subsequently gave the name

of *Ammosia* to the same section. If divisions founded on the number of the apical teeth of the mandibles be adopted, as suggested by Westwood, ("Ent. Soc., Trans., Vol. 2, new series,") this will probably be found to form a new sub-genus. I very much doubt, however, the value of such characters. I have three specimens of this insect, two from Port Denison, captured like the preceding, by night, and the other from Rockhampton.

The *Megacephala Australasiae*, (Hope, Trans. Ent. Soc., Vol. 4) from Port Essington, evidently belongs to this group.

Subgenus MEGACEPHALA, Latr.

4.—MEGACEPHALA CYLINDRICA.

Cyaneo-viridis mandibulis antennis pedibus abdomineque piceis, elytris cylindricis punctis ad basin excavatis.

Long. 10 lin., lat. 3 lin.

Hab. Peak Downs.

The whole upper surface, and the under surface of the head and thorax are of a brilliant bluish green; the basal half of the elytra is covered with small roundish depressions, and the remainder is quite smooth. The mandibles, antennæ, legs, and abdominal segments, are of a ruddy brown hue.

This beautiful insect was brought from Peak Downs, many years ago, by Sir T. S. Mitchell. In its cylindrical, shoulderless form, and brilliant colour, it closely resembles the type of the genus *M. Senegalensis*. It seems remarkable that we should possess here in Australia, insects of which the types are to be found in Tropical Africa and South America, as is the case with the genera *Megacephala* and *Tetracha*. It is, perhaps, still more remarkable, that while all the Australian species known come from the far North, not a single species of the family has ever been found in India, or the Indian Archipelago, or indeed, in any part of Asia.

Genus DISTIPSIDERA, Westw.

(Mag. of Zool. and Bot., p. 251.)

5.—DISTIPSIDERA VOLITANS.

Nigra nitida subtus atro-cyanea, labri disco lurido, elytrorum

vittâ obliquâ humerali fasciâ mediâ undulatâ apiceque lactifloreis.

Long.  $5\frac{1}{2}$  lin., lat.  $1\frac{1}{2}$  lin.

Hab. Port Denison.

Upper surface black, with a slight bronzy splendour about the head and thorax. Beneath very dark blue. Palpi and labrum pale yellow, the latter margined with black. The elytra have a short vitta sloping inwards from the shoulder, a wavy fascia behind the middle, not reaching the suture, and the apex cream coloured, while the legs are black.

This species seems to be tolerably abundant about Port Denison.

#### 6.—D. CURSITANS.

*Æneo-olivacea* mandibulis labro antennarum articulo basali pedibusque luridis; elytrorum humero fasciâ mediâ apiceque flavis.

Long. 5 lin., lat.  $1\frac{1}{4}$  lin.

Hab. Clarence River.

Upper surface of head, thorax, and elytra, bronze; beneath bluish black, with a metallic brilliancy. The palpi, mandibles labrum, basal joint of antennæ and legs, are of a dirty yellow colour. The elytra have a patch on the shoulders, a waved post-median fascia, not reaching the suture, and the apex, yellow.

The only other species of this genus known to me, is a large and well-known insect, which has been described by Westwood, (*Mag. Zool. Bot.*, p. 291), under the name of *undulata*, from its peculiar transverse wavy sculpture. The two species I have now described have the same peculiarity of sculpture: I have not, however, made any mention of that peculiarity in the specific descriptions, as I believe it to be a generic character. The large labrum, and general form of these insects, show a close affinity to the genus *Therates*, which is still further indicated by their similarity of habit, both genera frequenting trees, and running rapidly over their leaves.

## Family CETONIIDÆ.

## Genus SCHIZORHINA.

## 7.—SCHIZORHINA MARGINIPENNIS

*Atra* thorace subtilissimè punctato, elytris sulcatis sulcis punctatis vittâ latâ marginali lactifloreâ, corpore subtus pilis viridi-albis tecto.

Long. 16 lin., lat. 9 lin.

Hab. Port Denison.

The whole insect is of an uniform, not very shining black; the head and clypeus, which are punctured, are thinly clothed with a greenish white pubescence; the thorax is very finely punctured and almost smooth towards the scutellum, which is quite smooth, with the exception of some punctured striolae at the base; the elytra are broadly sulcate, the depressions punctured, a broad margin of yellow pubescence extends from the humeral projection on each side to the apex; the underpart of the head and thorax is clothed with greenish yellow pile; the pygidium, abdominal segments, and thighs, are covered with a short greenish white pubescence.

I have only one specimen of this, the most beautiful insect of the family. Mr. W. S. MacLeay has, however, in his collection an insect from Wellington Valley, which appears to be identical with it.

## 8.—S. ATRIPENNIS.

*Atra* nitida, thorace rufo. elytris subtilissimè punctatis apud suturam posticè carinatis carinis acuminatis, pedibus rufis tarsisque nigris.

Long. 15 lin., lat.  $6\frac{1}{2}$  lin.

Hab. Clarence River.

Shining black; the penicils at the extremity of the external lobe of the maxillae are large and ferruginous; the clypeus is deeply emarginate, and, with the head, is punctured; the thorax is dark red and finely punctured; the scutellum and elytra are also finely punctured, the latter having the suture elevated posteriorly into a ridge, which terminates in a sharp point at the apex; the legs are red, with the knee points and tarsi black.

This insect has been known for some time ; but I have not been able to find it described anywhere. The elytra appear more truncate and the pygidium more acuminate than is usual in the group.

9.—S. VELUTINA.

*Crocea opaca, subtus nigra pilosa, thorace maculis duabus magnis triangularibus, elytrisque maculis sex atris, scutello atrocincto, pedibus luteis.*

Long. 10 lin., lat. 5 lin.

Hab. Port Denison.

The upper surface is of a velvety looking saffron or orange, spotted with the deepest black ; the clypeus is punctured ; the top of the head and eyes are black ; the thorax has two large discal, somewhat triangular patches, and a small spot behind, jet black ; the scutellum has a narrow border of the same colour ; the elytra have three black spots on each side, one near the apex of the scutellum, the second a zigzag one, half way between that and the apex, and the third, a small one near the apex ; the pygidium has a black mark in the centre, and two small spots on each side ; the under surface is of a dark hue, covered with a whitish pubescence, each segment of the abdomen having a yellow spot on the side ; the legs are reddish ; the fore tibiae are without external dentations.

I have only one specimen of this beautiful insect.

10.—S. IMPAR.

*Testacea nitida, capite nigro, thorace leviter punctato, elytris irregulariter striato-punctatis, suturâ nigrâ, pedibus mesosternoque nigris.*

Long. 11 lin., lat.  $5\frac{1}{2}$  .

Hab. Rockhampton.

The head is black and closely punctured ; the thorax testaceous and finely punctured ; the scutellum is black and smooth ; the elytra are testaceous and striato-punctate ; the striae most regular near the suture, along which there is a black vitta, gradually narrowing as it approaches the apex. There is a good deal of ferruginous hair on the under surface ; the mesosternum and legs are shining black.

In general appearance this insect very much resembles *S. dorsalis*; the sculpture of the elytra is, however, very different.

11.—*S. VIRIDISIGNATA*.

Nigra nitida thorace punctato, elytris subsulcatis punctatis vittâ versus scutellum obliquâ fasciâ undulatâ maculisque apicalibus viridibus, pygidio flavo-guttato.

Long.  $10\frac{1}{2}$  lin., lat.  $5\frac{1}{2}$  lin.

Hab. King George's Sound.

Black, shining; the head and thorax finely punctured; the elytra coarsely punctured and slightly sulcated, with an oblique green band on each side of the scutellum, a wavy transverse band of the same colour behind the middle, and a small spot at the apex; there are one or two small yellow spots on each side of the pygidium; the under surface and legs are black and hairy, the latter are strong and dentated.

I have only one specimen, and that imperfect, of this species. It bears a strong resemblance to *S. frontalis*.

12.—*S. UNICOLOR*.

Nigra obscura capite thorace scutelloque densè punctatis, elytris crassè punctatis pilosis, corpore subtus cinereo-hirto.

Long.  $9\frac{1}{2}$  lin., lat. 5 lin.

Hab. King George's Sound.

This insect is of an uniform dull black; the head, thorax, and scutellum, are closely punctured; the elytra, which are clothed with long decumbent hairs, are covered with coarse elongated punctures; the under surface is cinereo-villose. There cannot be a doubt of the near affinity of this insect to the last, notwithstanding its very different aspect. It has the same strong dentations on the intermediate and hind tibiæ, with the dilated apical processes of the latter. They are both from King George's Sound, and are, almost the only *Cetoniidæ* I have seen from Western Australia.

13.—*S. VARIABILIS*.

Nitida capite thoraceque leviter punctatis, elytris punctatis lincis duabus longitudinalibus suturâque subelevatis glabris, femoribus tibiisque posticis subtus villosis.

Long.  $8\frac{1}{2}$  lin., lat  $4\frac{1}{4}$  lin.

Hab. Port Denison.

Var. 1. Tota nigra.

Var. 2. Rufa, subtus nigra, thoracis maculis duabus, scutello elytrorumque suturâ nigris.

Var. 3. Nigra, thorace elytrisque piceo-marginatis.

There are three distinct varieties as described above. 1st. Black, entirely. 2nd. Red, with two spots on the thorax, the scutellum and the suture of the elytra black, the under part of the body black, the legs red: and, 3rd. Black, with the lateral margins of the thorax and elytra of a pitchy red. They are all shining. The head and thorax are finely punctured, the latter almost smooth on the disk; the elytra are punctured in imperfect striæ; the inferior margin of the hind thighs and tibiae are clothed with an uniform thick brush of cinereous hair.

The resemblance to *S. gymnopleura* is here exemplified, not only in appearance, but in the tendency to vary. The difference seems chiefly to consist in the more elongated form, less punctured thorax, and less villose under surface of this insect.

#### 14.—S. OCELLATA.

Flava nitida thorace guttis duabus lateralibus maculisque duabus magnis discalibus versus basin connexis nigris, elytris rubris vel nigris subsulcatis punctatis maculis circa scutellum ovatis rotundatis versus apicem nigris flavocinctis.

Long.  $6\frac{1}{2}$  lin., lat.  $3\frac{1}{2}$  lin.

Hab. Port Denison.

Yellow; the top of the head is black; the thorax is finely punctured, and has a small black patch near the centre of each lateral margin, and two large somewhat triangular patches of the same colour on the disk, sometimes only slightly joined behind, and having some resemblance to the letter M, in other instances completely joined and forming one large mass; the scutellum is black, margined with yellow towards the apex; the elytra are slightly sulcate and coarsely punctured, generally of a reddish colour margined with yellow, as are also a black patch on each

side of the scutellum, and a round ocellus looking spot near the apex of each elytron; the pygidium has the centre and several small spots, black; the legs and abdominal segments are reddish, variegated with yellow; the under surface is but slightly pilose.

15.—*S. DECORTICATA*.

*Atra nitida punctata maculis glabris decorticatis, thoracis lateribus elytrorumque maculis duabus discalibus lactifloreis; mesosterno utrinque maculis duabus, segmentorumque abdominalium lateribus albis.*

Long. 6 lin., lat. 3 lin.

Hab. Port Denison.

Deep shining black; head and thorax punctured; scutellum smooth; elytra striato-punctate. Along the lateral margins of the thorax, and on the disk of each elytron, is a dull depressed cream-coloured patch; spots of the same character, but nearly white, are to be found on the sides of the mesothorax and abdominal segments, and generally two on the pygidium, which is finely acuducted.

16.—*S. ASSIMILIS*.

*Atra nitida thorace punctato lateribus lactifloreis, elytris striato-punctatis, pygidio mesosterni segmentorumque abdominalium lateribus albo-guttatis.*

Long. 6 lin.; lat. 3 lin.

Hab. Port Denison.

Black, shining; head and thorax punctured, the latter with two yellow depressed spots, running into one another on each lateral margin. The elytra are coarsely and indistinctly striato-punctate. The mesosternum and abdominal segments have each a lateral white spot; the pygidium has two small spots of the same hue.

This is, probably, a variety of the last described species, the sculpture seems to be identical, and the main difference seems to be that there is not a vestige of the decorticated patch on the elytra, which is such a distinguishing feature in *S. decorticata*.

The four following species differ considerably in form and general appearance, from the rest of the Australian Cetonidæ.

All agree in having the body elongated, the thorax forming an almost elevated point over the top of the head, the elytra short and narrowed behind, the tarsi long and slender, and both the upper and under surface of the body lanuginose.

They seem to connect *Schizorhina* with that hairy section of the subgenus *Cetonia*, which is named by MacLeay *Trichioideæ*.

I propose to give them the subsectional name of *LENOSOMA*.

Subgenus *CETONIA*.

Section, *TRICHIOIDÆ*, MacLeay.

Sub-section, *LENOSOMA*, Mihi.

17.—*CETONIA FULGENS*.

Viridi-cuprea nitida hirta thorace punctato, elytris posticè disco subcarinato fossulâque discoidali punctatâ, corpore subtus viridiori cinereo-piloso, tibiis tarsisque piceis.

Long. 6 lin., lat. 3 lin.

Hab. Rockhampton.

Viridi-cupreous, with short erect hairs on the upper surface, beneath cinereo-pilose. The head and thorax are punctured; the scutellum smooth. The elytra are somewhat sulcate posteriorly, with a central depression; they are punctured, with fine striolæ transverse near the margins, and longitudinal near the suture; the under surface is greener than the upper; the tibiæ and tarsi are piceous. The lamellated external lobe of the maxillæ is unusually large in this species.

18.—*C. TIBIALIS*.

Atra nitida incano-pilosa thorace punctato lineâ dorsalî glabrâ, elytris sulcatis sulcis subtilissimè punctatis fasciâ luteâ ornatis; tibiis posticis spatuliformibus.

Long. 6 lin., lat.  $2\frac{3}{4}$  lin.

Hab. Port Denison.

Black, shining, and incano-pilose on the upper and under surface; thorax punctate, with the dorsal line smooth; elytra sulcate, the depressions very finely punctured; a broad luteous fascia occupies the middle of each elytron, but does not extend to the suture. The short, broad, compressed and arcuated form of the hind thighs and tibiæ, (which is apparent in all of the group

I have seen except *C. fulgens*) is most strongly exhibited in this species, the tibiæ being quite spatuliform.

19.—*C. FASCICULATA.*

Nigra nitida pilosa elytris rufo-fasciatis disco posticè subcarinato, apiceque fasciculato, corpore subtus testaceo-piloso.

Long. 6 lin., lat. 3 lin.

Hab. Illawarra.

Black and shining; the head is covered with yellowish hair; the thorax and elytra with black; the dorsal line of the thorax is much elevated in front, forming a protruded point. The elytra, which have a wavy red fascia in the middle, are depressed behind the scutellum, and carinated towards the apex, near which are two bundles of long reddish hair; the under surface is testaceo-pilose, with tufts and brushes of the same colour on the mesothorax and abdominal segments.

I have one specimen of this insect from Illawarra. I have never seen it elsewhere.

20.—*C. INCANA.*

Nigra nitida incano-pilosa thorace punctato, elytris sulcatis punctatis octoguttatis guttis flavis, pygidii disco piloso.

Long.  $6\frac{1}{2}$  lin., lat.  $2\frac{3}{4}$  lin.

Hab. Rockhampton

Upper and under surface black, shining, and incano-pilose, the thorax is punctate, the scutellum is long, narrow, pointed, and smooth, the elytra have a longitudinal discal depression, which is densely punctured, with scattered punctures over the rest of their surface. There are four small yellow spots on each elytron, two discal, of which, one is above, the other below the middle, and two lateral, one just below the humeral swelling, the other in the middle; the pygidium has a narrow line of gray hair down the centre, and there are tufts of the same over the entire under surface.

I have seen another insect evidently belonging to this subsection in the Cabinet of Mr. W. S. MacLeay, at Elizabeth Bay. It is labelled *Howittii*, MacLeay, and is from Port Phillip.

Since writing the foregoing descriptions of new Australian Cetonidae, it has occurred to me that the annexed tabular view

of all the known species of the subgenus *Schizorhina* may be acceptable to some of our Entomologists.

In order, however, to make it satisfactory to myself and intelligible to others, I must, as succinctly as I can, explain the position and divisions of the group we have been considering.

Mr. MacLeay, in the 3rd No. of "Smith's Illustrated Zool. of South Africa," in an admirable review of the whole family of *Cetoniida*, divides them into five genera, viz., *Trichinus*, *Cryptodinus*, *Macrominus*, *Gymnetinus*, and *Cetoninus*. It is with the last of these only, the typical and most numerous genus, that we have now to do.

*Cetoninus* is divided by Mr. MacLeay into the subgenera *Schizorhina*, *Coryphe*, *Goliathus*, *Ischnostoma*, and *Cetonia*. It is the first and last of these sub-genera only, in which any Australian insects are to be found. The first is entirely Australian, while *Cetonia* contains of Australians, only the group which I have named *Lenosoma*, and a species *C. brun-nipes*, which is apparently of the same section as the European *C. stictica*. The subgenus *Cetonia* is evidently by means of *Lenosoma* connected with *Schizorhina*, which subgenus Mr. MacLeay further sub-divides into five sections, viz., *Brunoniæ*, *Phillipsiæ*, *Integræ*, *Gymnopleuræ*, and *Insulares*.

Burmeister, subsequently in his "*Handb. d. Entom. III.*" adopted the characters Mr. MacLeay had given to these sections, but gave them names of his own, and called them genera.

These sections are susceptible of further sub-division. Indeed Mr. MacLeay has divided into sub-sections some of the more numerous sections of *Cetonia*. In *Schizorhina*, however, the number of species in each section is not so great as to render further sub-division necessary. Still any one acquainted with the subgenus must have noticed the natural grouping of the species, and the ease with which further sub-division might be made; for instance, the section "*Integræ*" at once resolves itself into at least three groups, which I have marked in the next page, the first consisting of four species, remarkable for the rounded yellow apex to the mesosternum; the second, of those which resemble *dorsalis* in form and colour; and the third, the group of which *frontalis* is the type, and of which there are, I believe, some undescribed species in the collection of Mr. MacLeay.

Family CETONIIDÆ.—“MacLeay.”

Genus CETONINUS.—“MacLeay.”

Sub-genus.—SCHIZORHINA.—“Kirby.”

SECTION.

Normal Group. Clypeus, deeply cleft.	{	BRUNONIE, <i>M'L.</i> Hemipharis, <i>Burm.</i>	{	Mesosternum produced, narrow flat. Elytra spinose at the apex.	{	Brownii, <i>Kirby</i> . <sup>*</sup> atripennis, <i>mihi.</i>			
		PHILLIPSIE, <i>M'L.</i> Schizorhina, <i>Burm.</i>		Mesosternum broad, flat, lanciform. Elytra with subsinuated sides, and spinose at the apex.		Phillipsii, <i>Schreib.</i> carinata, <i>Don.</i> margini-pennis, <i>mihi.</i> atro-punctata, <i>Kirby.</i>			
Aberrant Group. Clypeus, not deeply cleft.	{	INTEGRÆ, <i>M'L.</i> Diaphonia, <i>Newm.</i>	{	Mesosternum short, flat. Elytra, with sinuated sides, and no spines at the apex.	{	velutina, <i>mihi.</i> Bassii, <i>White.</i> obliquata, <i>Westw.</i> ocellata, <i>mihi.</i>	} 1.		
						dorsalis, <i>Don.</i> impar, <i>mihi.</i> palmata, <i>Schaum.</i> Bakewellii, <i>White.</i> cincta, <i>G. &amp; P.</i>		} 2.	
						frontalis, <i>Don.</i> viridi-signata, <i>mihi.</i> unicolor, <i>mihi.</i> Cunninghamii, <i>G. &amp; P.</i>			} 3.
						Australasie, <i>Don.</i> punctata, <i>Don.</i> ochracea, <i>Westw.</i> gymnopleura, <i>Fisch.</i> variabilis, <i>mihi.</i> decorticata, <i>mihi.</i> assimilis, <i>mihi.</i>			
GYMNOPLEURÆ, <i>M'L.</i> Eupæcila, <i>Burm.</i>	{	Mesosternum produced, flat. Elytra, with sinuated sides, and no spines at the apex.	{	insularis, <i>G. &amp; P.</i> Whitei <i>Aru.</i> Emilii? <i>Anciteum.</i>					
					INSULARES, <i>M'L.</i> Hemipharis, <i>Burm.</i>	{	Mesosternum produced, narrow, cylindrical. Elytra spinose at apex, and with parallel sides.	{	

Sub-Section.

The following species are named, but as I have never seen them, I have not placed them in any of the above sections,—they will probably be found to rank as follows:—

INTEGRÆ.

- S. dispar, *Newm.* Lond. Mag., New Series, 4, p. 366.
- xanthopyga, *Germ.* Linn., Ent. 3, p. 195.
- notabilis, *White.* Stok. Voy. Ins., p. 1, f. 5.
- Bestii, *Parry.* Westw. Arc. Ent.
- rugosa, *Schaum.* Trans. Ent. Soc., 5, p. 73.
- gratiosa, *Blanch.* Cat. Mus. Par.

GYMNOPLEURÆ.

- S. succinea, *Westw.* Trans. Ent. Soc., vol. 3.
- eburneo-guttata, *Blanch.* Cat. Mus. Par.
- nigriceps, *Blanch.* Cat. Mus. Par.

\* Two other species of this section in the collection of Mr. MacLeay, at Elizabeth Bay, are undescribed.